

Attorney Docket No.:
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REMARKS:

Reconsideration of the Examiner's rejection of claims 1-6 and 19-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,687,732 (Bector et al.) is respectfully requested.

The Examiner is respectfully reminded that, in considering the obviousness of a claimed invention over a proposed combination of prior art references, each of the references must be construed as a whole for what they fairly suggest to one skilled in the art. Moreover, in order to combine the teachings of two or more references for the purposes of establishing a prima facie case of obviousness, one skilled in the art must have incentive to combine the references in the manner suggested by the Examiner.

Rosenberg et al. discloses a routing strategy (that is, an addressing protocol) useful in a satellite communications system in which a number of ground-based sectors are serviced by a satellite communications network, with each individual satellite in the network forming a network node. The ground-based sectors contain a plurality of cells, and each of the cells contains a plurality of terminals.

Each of the ground-based sectors is provided with an address that incorporates a binary Gray code, and the appropriate routing of a packet of information that arrives at a satellite node within the network and that is addressed to a particular ground-based sector (and more particularly, to a particular terminal contained within a particular cell within a particular ground-based sector) is determined from the Gray code in the packet header. As depicted in FIGs. 7 and 9 of the reference, a satellite receiving the packet performs a Gray code analysis. If the analysis indicates that the destination of the packet is one of the cells covered by the satellite, then the packet is sent to the

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satellite downlink. Otherwise, the analysis determines which satellite in the network the packet should be forwarded to.

Rosenberg et al. by itself fails to render the inventions of claims 1 and 19 (from which the remaining rejected claims depend) obvious, because it does not teach or suggest the element of "if the element is not in the selected application format: routing the message to a next location; and if the message is in the selected format: routing the message to a selected application processor ... and [then] routing the message to the next location". In particular, Rosenberg et al. does not teach the step of "routing the message to the next location" subsequent to the step of processing the message by the selected application processor.

The Examiner argues, in essence, that the claimed element of an "application format" is met by the code stored at a satellite node in the system of Rosenberg et al. The Examiner also argues, in essence, that the claimed element of an "application processor" is met by the component in the satellite node that performs the Gray code analysis.

Under the Examiner's analysis, the claimed step of determining whether the message is "in the selected application format" refers to the process whereby the satellite node compares the Gray code of the message to see if it corresponds to a cell covered by the satellite (note that Rosenberg et al. teaches, at Col. 10, lines 33-34, that "The satellite node is where the routing algorithms are implemented."). The Examiner suggests that this function is performed by the "application processor". Hence, under the Examiner's interpretation of Rosenberg et al., if no such correspondence exists, then the message is routed to the next location (that is, the message is routed to the next satellite node).

The problem with the Examiner's argument arises when a correspondence does exist. In this case, the claim 1

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requires "routing the message to a selected application processor" and "processing the message by the selected application processor" (note that claim 19 has similar requirements). However, Rosenberg et al. clearly teaches that, when a correspondence in the codes exists (that is, when the destination of the packet is one of the cells covered by the satellite), then the packet is sent to the satellite downlink, not to another satellite node. Hence, the message is neither routed "to a selected application processor" nor processed "by the selected application processor" as required by the claims.

The Examiner concedes that Rosenberg et al. does not teach the element of processing the message by the selected application and then routing the message to the next location, but relies on Bector et al. for this teaching. However, the Examiner is respectfully reminded that, in order to combine the teachings of two or more references for the purposes of establishing a prima facie case of obviousness, one skilled in the art must have incentive to combine the references in the manner suggested by the Examiner. In the present case, no such incentive exists.

The system of Bector et al. is designed to deal with certain types of problems that arise in connection with the use of proxy servers. These problems are discussed in the section labeled "Deficiencies of Past Approaches" beginning at Col. 2, Line 55 of Bector et al. Basically, the solution proposed in Bector et al. for dealing with these problems is to configure the network interface card of the proxy server to bypass certain packets based on a comparison of the source and destination IP addresses of the packet to a table containing rules corresponding to one of the IP addresses. In particular, if a match is found, the packet is forwarded to its original destination without further processing by the

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proxy server. If no match is found, the packet is processed by the proxy server in the usual manner.

The Examiner argues that one skilled in the art would find it obvious to combine the teachings of Bector et al. with those of Rosenberg et al. "because Bector's processing [of] the message by the selected application and routing the message to the next location would improve the efficiency of Rosenberg's system by allowing the traffic packet to direct transfer to the server bypass the proxies server to reduce traffic load on the server." Applicants respectfully disagree.

First of all, the relevant portion of the network of Rosenberg et al. that the Examiner is relying on for his obviousness rejection consists of the satellite nodes and the edge terminals. Thus, as noted above, the Examiner is construing the claimed element of an "application format" to be met by the code stored at a satellite node in the system of Rosenberg et al., and is construing the claimed element of an "application processor" to be met by the component in the satellite node that performs the Gray code analysis. Similarly, the Examiner is interpreting the claimed step of determining whether the message is "in the selected application format" as referring to the process whereby the satellite node in the network compares the Gray code of the message to see if it corresponds to a cell covered by the satellite. Hence, it is this portion of the network of Rosenberg et al. that the proxy server of Bector et al. would have to be inserted into in order for the claim limitations to be met in accordance with the Examiner's argument.

However, one skilled in the art would have no incentive to equip this portion of the network of Rosenberg et al. with a proxy server, since this portion of the network of Rosenberg et al. merely serves as an extended communications link to deliver a packet to its approximate geographic

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location. Hence, aside from managing the packet routing strategy, the satellite nodes in the network of Rosenberg et al. are "dumb" devices that serve much the same functionality as microwave transmission towers.

In light of the foregoing, if one skilled in the art were to equip the network of Rosenberg et al. with proxy servers, the logical location for inserting the proxy servers into the network would be at some point after the edge terminals. At that location, the proxy servers would be closer to the client, would not significantly affect network speed, and would be much easier and far less expensive to implement than insertion between satellite nodes. In this respect, the Examiner is reminded that he must show that a proposed modification of a prior art reference as required to arrive at a claimed invention would be desirable.

Moreover, the claims require, in essence, that the message is routed to the next location regardless of whether the message is in the selected application format, since the only effect of the application format is whether the message is processed by the selected application processor. It is clear that the "next location" referred to in the claims is the same in each instance, because the first instance of this element is "routing the message to a next location", and the second instance of this element is "routing the message to the next location" [emphasis added]. Thus, the second recital of this element refers back to the first recital for antecedent basis. By contrast, in the system of Rosenberg et al., the "next location" that the message is sent to necessarily differs depending on the outcome of the Gray code analysis.

Bector et al. fails to cure this deficiency. In particular, even if the system of Rosenberg et al. was modified to include a proxy server and the associated methodology as described in Bector et al., this modification

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would have no effect on the Gray code analysis performed by the satellite nodes which, as noted above, would still result in the situation where the "next location" that the message is sent to necessarily differs depending on the outcome of the Gray code analysis.

Reconsideration of the Examiner's rejection of claims 7-12, 14 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,687,732 (Bector et al.), and further in view of U.S. 6,578,147 (Shanklin et al.), is respectfully requested.

The Examiner interprets the "application service devices" of claim 7 as satellite nodes, and the "particular application" as the terminals at the edge of the satellite. See Paragraph 11 of the Office Action. However, Applicants respectfully note that claim 7 also requires

wherein each unprocessed application-specific message is processed with the particular application for which it is configured, whereby a plurality of processed application-specific messages is produced; and

wherein the plurality of application service devices are further configured to send the each processed application-specific message to the fabric".

As noted above, Rosenberg et al. clearly teaches that, when a correspondence in the Gray code of the message and the code of the satellite node exists (that is, when the destination of the packet is one of the cells covered by the satellite), then the packet is sent to the satellite downlink, not to another satellite node. Moreover, once the message is sent to the downlink, it is forwarded to the cell specified in the address. Hence, once the message is processed by the terminals at the edge of the satellite (the "particular application" in the Examiner's interpretation),

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it is not sent anywhere by the satellite nodes (the "application service devices" in the Examiner's interpretation). Therefore, Rosenberg et al. fails to teach or suggest the second of the two quoted steps of the claimed process.

This deficiency is not cured by Bector et al., because this reference does not deal with Gray code analyses, and hence contains no teachings that would lead one skilled in the art to modify this aspect of the system of Rosenberg et al. Since Shanklin et al. also fails to cure this infirmity (and indeed was not cited for this purpose), the proposed combination of Rosenberg et al. and Shanklin et al. fails to support a prima facie case of obviousness.

Reconsideration of the Examiner's rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,687,732 (Bector et al.) and U.S. 6,578,147 (Shanklin et al.), and further in view of Troubleshooting (TB), is respectfully requested.

Claim 13 depends from claim 7. The infirmities of Rosenberg et al., Bector et al. and Shanklin et al. with respect to claim 7 have been noted above. These infirmities are not cured by TB. Hence, claim 13 is patentable over the combination of Rosenberg et al. and TB.

Reconsideration of the Examiner's rejection of claim 15 under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,687,732 (Bector et al.) and U.S. 6,578,147 (Shanklin et al.), and further in view of Troubleshooting (TB), is respectfully requested.

Claim 15 depends (ultimately) from claim 7. The infirmities of Rosenberg et al., Bector et al. and Shanklin

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et al. with respect to claim 7 have been noted above. These infirmities are not cured by TB. Hence, claim 15 is patentable over the combination of Rosenberg et al. and TB.

Reconsideration of the Examiner's rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,587,732 (Bector et al.), and further in view of U.S. 6,820,250 (Muthukumar et al.), is respectfully requested.

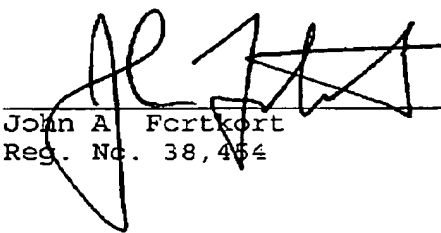
Claim 22 depends from claim 19. The infirmities of Rosenberg et al. and Bector et al. with respect to claim 19 have been noted above. These infirmities are not cured by Muthukumar et al. Hence, claim 22 is patentable over the combination of Rosenberg et al. and Muthukumar et al.

It is believed that no fees are due with this response. However, if any fees are due, or if a credit is deemed appropriate, the Commissioner is hereby authorized to charge such fees (or to assign such credit) to the deposit account of Fortkort & Houston P.C., Deposit Account No. 50-3694.

Respectfully submitted,

Dated:

9-5-2006


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